UNITED
NATIONS

TD

United Nations
Conference
on Trade and
Development

Distr.
GENERAL

TD/B/COM.1/EM.5/1
24 February 1998

Original: ENGLISH

TRADE AND DEVELOPMENT BOARD
Commission on Trade in Goods and Services, and Commodities
Expert Meeting to Examine the Effectiveness and Usefulness
for Commodity-dependent Countries of New Tools in
Commodity Markets: Risk Management and Collateralized Finance
Geneva, 4-6 May 1998
Item 2 of the provisional agenda

ADOPTION OF THE AGENDA

Provisional agenda and annotations

I. PROVISIONAL AGENDA

1. Election of officers

2. Adoption of the agenda

3. Examination of the effectiveness and usefulness for commodity-dependent countries of new tools in commodity markets: risk management and collateralized finance

4. Adoption of the outcome of the Meeting

GE.98-50212

II. ANNOTATIONS TO THE PROVISIONAL AGENDA

Item 1 - Election of officers

1. It is recommended that the Expert Meeting elect a Chairperson a id a Vice-Chairperson-cum-Rapporteur.

Item 2 - Adoption of the agenda

2. The provisional agenda for the meeting is contained in section I above. The schedule of meetings for the three days is attached to this document.

Documentation

TD/B/COM.1/EM.5/1 Provisional agenda and annotations

Item 3 - Examination of the effectiveness and usefulness for commodity-dependent countries of new tools in commodity markets: risk management and collateralized finance

(a) The usefulness of commodity price risk management and warehouse receipt finance

3. The Expert meeting may wish to address this item on the basis of the specific topics set out below.

4. While modern market-based commodity trading instruments, such as price risk management tools and various sophisticated techniques to facilitate finance through the use of commodities as collateral, are not a panacea, they can serve such goals as securing budgets, improving cash flow management, improving access to credit and reducing credit cost. Under this topic, the experience in using these instruments of commodity producers and traders in developing countries and countries with economies in transition will be examined. This will make it possible to determine better the possibilities and limits of these instruments, and the constraints on their better use.

(b) Structuring longer-term finance around commodity collateral

5. The progress in financial engineering techniques has been particularly fast in recent years. Commodity producers and others controlling, in one way or another, commodity assets now have the choice of a wide array of financing strategies. Several of these strategies are centred around the use of commodities, or the likely earnings from commodities, as collateral to make financing more secure and thus more attractive to lenders. However, such strategies can be complex, and set-up costs can be significant. Under this topic, the role of these strategies using commodities as collateral will be examined on the basis of practical experiences with a view to formulating conditions under which they can outperform other financing techniques. Constraints on the use of these strategies will also be discussed.

(c) Controls on the misuse of price risk management instruments

6. Among decision-makers, not only in Governments but also in many companies, the fear of using market-based price risk management instruments can be strong. The costly and well publicized experiences of companies such as Barings, Sumitomo and Union Bank of Switzerland can lead persons to assume that price risk management markets are dangerous to use. In practice, however, such losses are the exception to the rule, and most companies which use risk management markets do so rather successfully; very few, if any, have halted this use because of these large losses by other companies. Under this topic, the real dangers of not properly controlling the use of price risk management markets will be discussed, along with the implications for government and corporate policies.

(d) Government exposure to price risks, and practical solutions

7. Governments do not only set the framework within which the private sector can engage in price risk management (and access markets for collateralized finance); they are often also exposed in a more or less direct way to commodity price fluctuations. The level of tax and royalty income on exports and the level of subsidies necessary for parastatal companies or consumers (for crucial imported commodities such as fuels and cereals) are likely to vary directly with world market commodity prices. If these taxes/royalties and/or subsidies are important for the government budget, it may be worthwhile for the government to externalize some of these risks using commodity price risk management markets. The experience in this area will be evaluated, and implications for government policy discussed.

(e) The potential role of the international community in improving commodity price risk management and financing practices

8. Traditionally, international commodity policies have been supply- or demand-oriented. It can be argued that nowadays, transaction-oriented policies, which focus on the processes through which the commodity passes from production to consumption, can be at least as effective. While promoting the use of market-based commodity price risk management and collateralized finance instruments is only part of such policies, it can make a significant contribution to improving the efficiency of commodity trade, to the benefit of both producers and consumers. International organizations working on commodity policies, including international commodity bodies, can play an important role in this regard. Under this topic, the possibilities that exist, and in particular the ways in which international commodity bodies can incorporate price risk management and collateralized finance into the core of their strategies, will be examined.

Documentation

TD/B/COM.1/EM.5/2	"Examination of the effectiveness and usefulness for commodity dependent countries of new tools in commodity markets: risk management and collateralized finance: report by the UNCTAD secretariat"

9. The Expert Meeting will adopt its recommendations, findings/conclusions at the end of the

Meeting. The final report will be complied under the authority of the Chairperson after the conclusion of the Meeting.

Schedule of meetings

Monday 4 May	Tuesday 5 May	Wednesday 6 May
10 a.m. Plenary Opening of the meeting Election of officers; Adoption of agenda. Informals Item 3 Sub Item 3(a)	10 a.m Informals (cont'd) Item 3 Sub Items 3(b) and 3(c)	10 a.m Informals (cont'd) Item 3 Sub Items 3(d) and 3(e)
3 p.m. Informals (cont'd) Item 3 Sub Items 3(a) and 3(b)	3 p.m. Informals (cont'd) Item 3 Sub Items 3 (c) and 3(d)	3 p.m. Informals (cont'd) Consideration of the outcome of the Meeting Plenary Adoption of the outcome of the Meeting

UNITED
NATIONS

TD

United Nations
Conference
on Trade and
Development

Distr.
GENERAL

TD/B/COM.1/EM.5/2
24 February 1998

Original : ENGLISH

Trade and Development Board
Commission on Trade in Goods and Services,
and Commodities, Third Session
Expert Meeting to Examine the Effectiveness and Usefulness
for Commodity-Dependent Countries of New Tools
in Commodity Markets: Risk Management and Collateralized Finance
Geneva, 4 May 1998
Item 3 of the provisional agenda

EXAMINATION OF THE EFFECTIVENESS AND USEFULNESS FOR COMMODITY-DEPENDENT COUNTRIES OF NEW TOOLS IN COMMODITY MARKETS: RISK MANAGEMENT AND COLLATERALIZED FINANCE

Report by the UNCTAD secretariat

CONTENTS

		Paragraphs
	Introduction	1 - 5
I.	The usefulness and effectiveness of modern financial instruments for enterprises	6 - 20
	A. Experiences	6 - 9
	B. Constraints	10 - 14
	1. Lack of awareness and training	10 - 11
	2. Institutional weaknesses	12
	3. Policy legal and regulatory framework	13
	4. Sovereign risks	14
	C. Effectiveness	15 - 20
II.	The importance of price risk management and access to affordable credit for farmers	21 - 30
	A. Experiences	21 - 26
	B. Possibilities for overcoming constraints	27 - 29
	C. Effectiveness	30
III.	Government policies and price risk exposure	31 - 50
	A. Direct government exposure to price risks, and ways to mitigate these risks	33 - 46
	1. Hybrid stabilization funds and policies	34 - 35
	2. Commodity-price-dependent debt	36 - 37
	3. Using futures and over-the-counter risk management markets	38
	4. Obstacles	39 - 46
	B. Indirect risk	47 - 49
	D. Effectiveness	50
IV.	Conclusion	51 - 57

GE.98-50218

INTRODUCTION

1. In 1995, commodities still accounted for 64 per cent of the exports of Latin America and the Caribbean, 74 per cent of the exports of Africa, and 39 per cent of the exports of the countries of Central and Eastern Europe. Asia is the only region where most countries have successfully diversified away from commodities (whose share in total exports is now 23 per cent), but even here, some groups of countries (the Pacific Island States, oil exporters) remain highly commodity-dependent. Commodities are also important in the imports of most countries.

2. Thus, it should come as no surprise that adverse prices, or adverse trading conditions, can have a major impact on most commodity-dependent countries. Commodity markets are unfortunately not stable, and the lack of success of past efforts to stabilize them makes it likely that they will remain so in the near future. Modern market-based financial instruments, such as futures, options, swaps and various forms of collateralized finance (see box 1), may not be the ideal solution to the problems caused by market instability, but no better alternatives are currently available.

3. The great advantages of these instruments are twofold. Firstly, they can be used to improve the risk profile of an entity, making it less exposed to negative price developments. In other words, their use improves the predictability of future costs and/or earnings (those who carry the burden of commodity price risk while good price risk management instruments exist are, in effect, speculating). The second advantage (which partly derives from the first one) is that they reduce default risk: lenders can feel more secure in providing finance, and thus will be willing to provide more funds on better terms. These advantages apply at least in theory to any entity (though in practice the use of the instruments may be difficult for many entities), whether it is the central government, a parastatal, a commodity firm, or a farmer. The disadvantages are that proper use needs to be learned, some transaction costs will be incurred, and, as far as managing risks is concerned, there is generally a trade-off: one can indeed reduce the losses which would result from negative price developments, but this advantage is often partly offset by the loss of some of the possibilities with regard to benefiting from price improvements.

Box 1
Modern commodity price risk management and collateralized finance instruments

Counterparty and price risks have always been a part of commodity production, processing and trade. Instruments to manage these risks were developed centuries ago in the form of forward contracts, trade associations, etc. However, in the past 20 years or so, the range and sophistication of such instruments has grown rapidly. In the price risk management area, the possibilities offered by commodity exchanges have improved, and there has been a rapid increase in the role of banks and other financial firms. In commodity finance, new techniques have been developed to mitigate counterparty risk, in particular through innovative uses of commodity transaction flows as security for financing transactions. As the value of the commodities thus used depends partly on prices, price risk management is usually a part of these new financing techniques.

The main potential disadvantage of these instruments is that they are complex and can be used badly or even for fraudulent purposes - which can result in costly losses and even bankruptcies. Well publicized cases such as that of Barings can instill a fear of these modern financial markets among those with little experience in using them. Among the instruments offered, some require considerable management time, while others are quite easy and straightforward to use. For the first type of instruments, guidelines on how good control systems can be built up are available.

The various instruments and their advantages and disadvantages are discussed in detail in UNCTAD , "A survey of commodity risk management instruments", UNCTAD/COM/15/Rev.2, March 1998; UNCTAD, "Collateralized commodity financing, with special reference to the use of warehouse receipts", UNCTAD/COM/84/Rev.1, March 1998; and UNCTAD, "The role of collateralized finance in funding the commodity sector", UNCTAD/ITCD/COM/14, March 1998. For a discussion of control systems and on how to develop a risk management strategy, see UNCTAD , "Company controls and management structures - the basic requirements for a sound use of market-based risk management instruments", UNCTAD/ITCD/COM/ Misc.1, 1996.

4. Modern market-based commodity trading instruments, such as price risk management tools and various sophisticated financing techniques, are not panaceas; in particular, they will not help much in stabilizing world commodity markets - they just help entities to cope better with unstable markets. However, they can serve more modest goals, such as securing budgets, improving cash flow management, improving access to credit or reducing credit costs.

5. This paper examines the usefulness and effectiveness of these instruments for mitigating risks and reducing transaction costs for important groups of actors - enterprises (irrespective of whether they are privately or publicly owned), farmers and Governments. It should be noted that, with the liberalization of commodity markets, competition has increased. Actors now need to make full use of the array of marketing instruments available to them in order to cope with increasing market pressures. The withdrawal of Governments from the marketing and pricing of commodities has also exposed new groups of actors to previously unknown price risks and difficulties in accessing credit markets. The practical issues with which these often small actors are confronted when they wish to use these instruments are examined in some detail throughout the paper.

Chapter I

THE USEFULNESS AND EFFECTIVENESS OF MODERN FINANCIAL INSTRUMENTS FOR ENTERPRISES - PRICE RISK MANAGEMENT AND COLLATERALIZED FINANCE

A. Experiences

6. International commodity markets are becoming increasingly competitive, putting greater pressure on commodity exporters. The use of modern financial markets can be instrumental in enabling exporters to remain competitive: it allows them to be more flexible, enables them to take more risks, and helps them to keep costs low.

7. If enterprises can use price risk management markets, they can improve their functioning in various ways; contrary to what is thought at times, risk management is not a zero-sum game. Research by KPMG (one of the major international audit firms) among its clients showed an average profit increase of 55 per cent after the adoption of a risk management programme - 20 per cent of this due to better margins and higher volumes of business with existing clients, 15 per cent to better asset-liability management, and 10 per cent to new products and/or clients.[1]

8. These increases in profit are possible because:

(a) Managers can concentrate on strategic issues rather than having to worry about day-to-day price movements (though it should be noted that, if they opt for complex, labour-intensive risk management strategies, they do need to devote time to proper supervision of the implementation of these strategies);

(b) Marketing and pricing policies can be improved;

(c) Cashflow management is much more efficient;

(d) Funds for profitable new ventures are more easily available, partly because the credit rating of the firm improves.

9. The use of collateral to facilitate financing directly reduces counterparty risk, including in

---

[1] Jean-Francois Casanova, "How to implement a risk management approach in African public organizations", in UNCTAD, *Proceedings of the Second African Oil Trade Conference* (UNCTAD/ITCD/COM/ MISC.14), United Nations, New York/Geneva, 1997.

international trade, which means that more money is available at lower cost. There are several ways in which collateral can be used; the most sophisticated involves the assignment of commodities to an offshore "Special Purpose Vehicle", which then issues bonds for sale to institutional investors.[2] Box 2 discusses one example of such a securitization, while box 3 gives a number of examples of these types of financing and the resulting improvement in credit rating (and thus financing costs).

Box 2
Using commodities as collateral - the case of Mobil Producing Nigeria Unlimited

Mobil Producing Nigeria (MPN) holds a 40 per cent interest in a joint venture with the Nigerian National Petroleum Corporation engaged in the offshore production of hydrocarbons. For a new project, i.e. the Oso Natural Gas Liquids (NGL) Project, it needed to raise US$ 330 million.

Nigeria is unrated, and as the United States parent company was unwilling to provide a guarantee on MPN's lending, MPN would normally not have been able to borrow money at a rate better than that paid by the Nigerian Government. To overcome this problem, an investment bank structured a so-called "asset-backed securities issue". The future production of NGL and crude oil of the project was sold to an international buyer, who assigned the future proceeds of this sale to an offshore trust. This trust then issued "trust certificates" that were sold to institutional investors, primarily in the United States of America. The issue was strongly oversubscribed (over US$ 1 billion was offered), and the interest rate paid by MPN on this 7-8 year loan (much longer than normally would have been available for a country like Nigeria) was 4 per cent lower than what it otherwise could have expected to pay.

This improvement in credit rating (and thus in credit conditions) is quite normal for collateralized finance. In dozens of cases, enterprises have been able to obtain large credits on conditions better than those available for their country.

B. Constraints

1. Lack of awareness and training

10. In developing countries and countries with economies in transition, many of the private entities now active on commodity markets have only been involved in international trade for a few years. Their knowledge and understanding of modern commodity marketing and financing methods is thus limited. The same can be said of many local banks; after years of Government-determined loan policies, they often do not have the skills or, generally, the experience needed to provide their clients with access to these modern financial markets. Thus, a major awareness-raising and training effort is required. Experience shows that, once they are aware of the possibilities, many of the larger companies access the markets rather fast.

11. In the case of parastatals, the problem is often a lack of awareness not on the part of parastatal marketing or financial staff but on the part of their political masters. Many of these companies are technically ready to start a programme of risk management (which can still take over a year to implement), but need proper political support.

2. Institutional weaknesses

12. Local banks are a natural intermediary for the use of modern financial instruments, in particular now that so many new, relatively small actors have become directly involved in commodity trade. Unfortunately, they are virtually absent from this area in most developing countries (with some notable exceptions, such as the Eastern and Southern African Trade and Development Bank), thus severely restricting the possibilities of smaller enterprises in particular, including farmers' associations. Other entities which could act as intermediaries, including farmers' associations, are often also quite weak.

[2] See also J. Coulter and A.W. Shepherd, "Inventory credit: an approach to developing agricultural markets", Food and Agricultural Organization/Natural Resources Institute, FAO Agricultural Services Bulletin 120, 1995.

3. Policy, legal and regulatory framework

13. An inadequate legal and regulatory framework is a major bottleneck for improved use of modern financial markets by enterprises. Policies that remove the incentives for risk management and collateralized finance are also a hindrance. Problems include bans on the use of risk management markets or policies or practices that amount to bans (e.g. not authorizing the use of overseas escrow accounts or of foreign exchange to pay margin calls); poor accounting standards; minimum export price policies or export/import taxation schemes that do not recognize hedging; export licensing schemes and other policies that restrict the possibilities for overseas lenders to take commodities as collateral;[3] direct interference in credit markets; an absence or lack of implementation of proper rules on bankruptcy proceedings; and a range of restrictions on the kind of assets that can be used as collateral (which effectively discriminate against the poor). Such restrictions can be expensive; World Bank research, for example, estimated the welfare losses caused in Argentina and Bolivia by barriers to secured (collateralized) transactions at 5 to 10 per cent of GNP.[4]

Box 3
Examples of asset-backed securities issued by developing countries

Issuer	Country	Country risk rating (S&P)	Issue's risk rating (S&P)	Commodities exported
Pemex	Mexico	BB	A	Oil
AHMSA	Mexico	BB	BBB-	Steel
Corpoven	Venezuela	B+	BBB	Oil
Bitor	Venezuela	B+	BBB-	Orimulsion
Alcoa do Brasil	Brazil	B	BBB-	Aluminium
Aracruz Celulose	Brazil	B	BBB	Pulp
Samarco	Brazil	B	BBB-	Iron ore
YPF	Argentina	B2*	BBB	Oil exports
Southern Peru Copper	Peru		BBB-	Copper
Ras Laffan	Qatar	BBB	BBB+	Oil
Mobil Producing Nigeria	Nigeria	not rated	Baa3 **	Oil
Freeport McRohan	Indonesia	BBB-	A	Gold

Source: based on conference presentations by Paribas Capital Markets and Credit Suisse First Boston.
S&P: Standard & Poor's rating
* Moody's rating - similar to B+ in S& P's rating structure
** Moody's rating - similar to BBB in S&P's rating structure.

4. Sovereign risks

14. When providing a risk management instrument or any form of finance to an entity in another country, the provider takes a risk not only on the performance of the counterparty, but also on the country where this counterparty is based. For example, will the counterparty be able to obtain foreign currency to meet his obligations? Will the government agency directly or indirectly responsible for export policy intervene in the counterparty's right to export? As it cannot be assumed that the same Government will be in power during the life of the transaction, is there a risk that its successor will renege on the original obligations? This sovereign risk adds to the cost of risk management (or, for that matter, any form of finance), and, unless mitigated by some form of guarantee, effectively excludes many entities from accessing the markets. Such guarantees have a cost, and probably more importantly, it can

[3] For a more complete overview of such laws and regulations hindering access to international credit markets, N. Budd, "Legal and regulatory aspects of financing commodity exporters and the provision of bank hedging line credit in developing countries", UNCTAD COM/56, 3 February 1995. This paper also discusses how these laws and regulations can be improved; for this see also M. Lubrano, "Strengthening the legal and institutional framework for secured transactions in Latin America", BCSD Latin America World Bank Seminar, Miami, February 1995.

[4] Heywood Fleisig, "Secured transactions: the power of collateral", Finance & Development, June 1996.

be very difficult to arrange them, in particular for parastatals and government departments which are often constrained in their ability to provide guarantees by the negative pledge covenants contained in their loan agreements with multilateral financial institutions.[5] There are some possibilities of obtaining outside guarantees - for example, the European Bank for Reconstruction and Development has guaranteed risk management programmes, and so has the International Finance Corporation, while a number of export credit agencies provide sovereign risks insurance. Box 4 describes a number of policy actions that can help to improve access to the financial markets discussed in this paper.

Box 4
Overview of possible policy actions to improve access to modern financial markets

IMPROVING SOVEREIGN RISK RATINGS

- Development of a proper warehousing system, including the required legal and regulatory framework
- Creation of possibilities for insurance in convertible currency
- Adaptation of commercial law to the exigencies of modern commodity trade, in particular laws relating to security in and title to goods and bankruptcy laws
- Broadening the system for the issuance of export licenses
- Reformulation of foreign exchange controls and minimum export price regulations in such a way that legitimate business transactions are no longer hindered
- Publicizing by the Government of its measures to stimulate modern marketing and financing practices

INCREASING THE CAPACITY TO USE MORE FULLY THE POSSIBILITIES FOR STRUCTURING COMMODITY FINANCE

- Concerted actions to increase the awareness of structured financing techniques among developing country government policy-makers, producers, processors, traders and banks, and to enhance their practical possibilities of entering into structured financing transactions
- Promotion of the role of regional and domestic banks as conduits for warehouse receipt financing
- Consideration of foreign locations for the storage of commodities

FACILITATING THE STRUCTURING OF COMMODITY FINANCE THROUGH INTERNATIONAL ACTION

- External financing of a warehousing infrastructure
- Creation of a "global warehousing" facility, with sovereign risks covered by an international agency
- Strengthening of systems for the discounting of warehouse-receipt finance-related letters of credit
- Promoting the standardization of physical trade contracts
- Enhancing the capacity for insuring the risks of warehouse-receipt-related transactions
- Modification of the negative pledge policies of international finance organizations

C. Effectiveness

15. Are modern financial markets effective in assisting enterprises to reach their goals? They normally bring the goals nearer, but there are some inherent limits to their use - limits that apply to any user, not just to developing country enterprises.

16. As commodity export earnings or import costs are a function of both volume and price, even with a price risk management programme, one remains exposed to quantity risks. One is also exposed to basis risk in reality, one will not be locking in the export prices of the country concerned, but rather a reference price (e.g. the New York Mercantile Exchange crude oil price). As long as one's export price moves fully in parallel with the international price, there is no problem, but if this correlation is less than perfect (the "basis risk"), the impact of the risk management programme can be disappointing. For example, if international prices remain stable while one's export prices fall by 10 per cent, even with a price risk management programme in place, there would be no compensation for the lower export prices. Accordingly, one of the preconditions for an effective risk management programme is that there is a liquid international risk management market which trades products whose price is well correlated with the prices of the products in which one is interested. In practice, this implies that, for the large majority of exporters of coffee, cocoa, oil,

[5] See also UNCTAD, "Counterpart and sovereign risk obstacles to improved access to risk management markets: issues involved, problems and possible solutions", TD/B/CN.1/GE.1/3, 2 August 1994.

copper and a range of other products and for importers of, for example, wheat, vegetable oils and sugar,[6] there are good possibilities for price risk management. For other products, in particular cotton, plywood and livestock, even though there are futures markets, they are hardly representative for the world as a whole. And for a number of important commodities, such as fish and iron ore, there is no futures market at all.

17. However, before concluding that this means that the use of these markets is not effective, one should examine the alternatives. Not using these markets means a continuing exposure to price risks for the full volume of production. Absolute price risks are generally much larger than the basis risks one assumes when using futures markets; in other words, using futures markets means that the likelihood of losing significant sums of money due to unfavourable price movements is much smaller and eventual losses are thus more easily manageable (when using futures contracts for risk management, the likelihood of gaining significant sums of money is also much lower, but as noted before, the whole purpose of risk management is to reduce risk, not to speculate on future price movements).

18. The time horizon for price risk management is also limited. This horizon has moved further away in recent years, and risk management markets for some commodities (crude oil, gold, aluminium, copper) are now reasonably liquid for more than five years out into the future. For soft commodities such as sugar, coffee and cocoa, however, it is generally difficult to put an effective risk management programme in place for periods much longer than two years, especially if one wishes to build in option elements. For annual crops such as wheat, the period is even shorter. So, while use of risk management markets is effective for ensuring annual budgets, it is not necessarily so for longer-term planning or investment periods. Nevertheless, having a risk management programme in place provides extra time for adaptation to changing market conditions.

19. The ultimate goals of price risk management are twofold: to increase flexibility in such a way that marketing can be improved and to ensure that the company always has enough cashflow to enable profitable ventures to be undertaken without unduly high financing costs. Depending on a company's cash flow situation and the size of relevant transactions, the use of price risk management and collateralized finance markets is not always the most effective way to reach these goals. If a company does not need this tool to improve its marketing, or if it is very rich in cash (or has very easy access to capital markets), then the use of price risk management markets can be a waste of resources. In practice, few companies fall in this category; most of the Fortune-1,000 companies, for example, use price risk management markets.

20. As to the effectiveness of collateralized financing, this normally brings lower interest rates but higher transaction costs than with unsecured credits. If the deal is small, or the company has a good track record and thus easy access to finance, the interest rate savings resulting from the use of collateral may be less than the extra transaction costs. In particular, if local banks are unable to arrange collateral finance, this can lock small enterprises out of the market. Nevertheless, collateral finance is making progress - for example, in Latin America it is increasingly replacing the more traditional, and more expensive, letter-of-credit-based commodity financing.

---

[6] Even though many importers buy these products at subsidized prices which may be barely correlated to world market prices, use of futures market can still be very useful - importers can put on a hedge when world market prices are favourable and issue a tender when attractive export subsidies are available. See FAO, "Using risk management in grain trade: implications for developing countries", Rome, CCP:GR 95/4, 1995.

Chapter II

THE IMPORTANCE OF PRICE RISK MANAGEMENT AND ACCESS TO AFFORDABLE CREDIT FOR FARMERS

A. Experiences

21. Governments in most countries have reduced their role in the agricultural sector in recent years, or are in the process of doing so. The impact on farmers has been twofold. Firstly, they are being exposed to price risks that previously were absorbed by the Government - gradually so in countries such as the United States of America, where the 1996 "Freedom to Farm" Act foresees a seven-year transition period, and from one year to the next in most developing countries and countries in transition. Secondly, with the withdrawal of Governments and the fragmentation of marketing systems, credit systems have often collapsed, negatively affecting productivity (as input supply was interrupted) and forcing farmers to sell their product directly after harvest (which reduces the prices they receive and distorts seasonal price behaviour).

22. Using price risk management instruments can be difficult (see box 5 for an example of such use). Transaction costs are such that the use of market-based risk management instruments only makes sense when done through a farmers' association. These associations need not only access to information about these instruments and the markets on which they are traded (which are often abroad) but also access to their trading facilities. There are then a whole range of constraints, ranging from the need to recruit appropriate staff to finding a willing intermediary and meeting the credit requirements of the market. Nevertheless, a number of farmers' associations in various countries have overcome these constraints and are actively providing their members with price protection through the use of futures and options markets (e.g. for coffee in Costa Rica and cotton in Uganda). Competition between traders also helps farmers to benefit from the existence of risk management markets.

Box 5
An example of the use of options for price protection by a farmers' association

On behalf of its members, a farmers' association wishes to buy agricultural inputs. However, the bank that it approaches for credit notes that the capacity to reimburse of the association (which also undertakes coffee marketing on behalf of its members) depends strongly on the prices that it will receive at the time the loan needs to be reimbursed. Coffee price volatility is such that, without risk management, their is a real danger that the needed minimum income will not be reached. Some international price ranges for arabica coffee in recent years are as follows:

1994: between 80 and 220 cts/lb
1995: between 110 and 180 cts/lb
1996: between 110 and 130 cts/lb
1997: between 130 and 270 cts/lb.

It would thus seem sound for the bank to protect the association's income through a risk management programme. Using forward contracts or futures is out of the question: if prices increase and the association is locked into a fixed price, farmers are likely to default on their delivery obligations to the association and deliver to traders instead. The bank therefore decides to include in the financing package a series of options which protect the association if prices fall but still allow it to benefit from price increases. Of course, the options have a cost, but without this, the association would possibly not have been able to obtain the input credit, and its members would not have had a guaranteed minimum price for their future production.

23. If a Government is willing to undertake the necessary policy actions, the problems in the credit system are relatively easy to reduce and indeed are on the way to being considerably reduced in a number of countries. Farmers are in theory good clients for credit institutions: in order to function efficiently, they need continuing access to credit (giving them an incentive to reimburse their loans in time), and the crops they produce or their livestock are good collateral for loans. What is needed is a system that allows banks to benefit from these relative strengths.

24. The key factor in this regard is the development of techniques to secure loan reimbursement.

Simplifying somewhat, there are two ways to do this. One is to gain some form of control over the payment for commodities - that is, if the commodities are indeed delivered, the buyer (e.g. a trader or a commodity exchange arranging farmers' sales) pays to a bank which has been providing inputs on credit to farmers; the bank then pays the farmers after deducting what is due on the credit. This system, or a slightly more sophisticated version of it, is used in several countries in Central and Eastern Europe and Central America and, for example, in Zambia.[7] A second solution which is often applied successfully is that of using the commodities themselves, rather than the anticipated payments for them, as collateral, and the most prevalent form of this is warehouse receipt finance (see box 6 for an example).[8]

Box 6
The benefits of warehouse receipt finance - an example for coffee in Kenya

Banks are willing to provide more credit on better terms if borrowers are willing to provide collateral and in the case of commodity finance, the commodities themselves are good collateral. Managing collateral brings additional costs, but these costs are more than offset by lower borrowing costs. The following is an example from Kenya, for a three-month credit:

	Without collateral management	With collateral management
Value of goods	US$ 7 mln.	US$ 7 mln.
Advance rate	50 %	80%
Loan proceeds	US$ 3.5 mln.	US$ 5.6 mln.
Interest rate	21.0 %	8.5 %
Interest cost	US$ 184,000	US$ 119,000
Storage and insurance costs	US$ 120,000	US$ 179,000
Total costs	US$ 304,000	US$ 298,000

The borrower using his commodities as collateral pays slightly lower charges on a 60 per cent higher loan.

Source: "Managing your collateral risk in Africa", presentation by R.P.G. Taylor, Manager, SGS Kenya Ltd., at the First African Oil Trade Conference, Harare, 15-17 April 1996.

25. In warehouse receipt finance, banks (or others) provide credit on the basis of goods which are stored in a (preferably) independently controlled warehouse. The default risk is shifted from the borrower to the warehousing company - often a large entity backed by financial guarantees and using insurance for further protection.

26. In many countries with economies in transition, including the Russian Federation, Poland, Hungary and Romania, warehouse receipt finance is being developed as a way to improve access to credit for small and medium-sized grain producers (with the added advantage that product quality is tested and improved).[9] In most developing countries, the focus is more on credits for producers of export crops (e.g. coffee in Uganda, pepper in Malaysia, sugar in Argentina), although in a number of countries (India, Philippines, Mali and Zambia, for example), use of grains and other local foodcrops as collateral for credits to farmers is also being developed. The main obstacles are poor legal and regulatory frameworks, as already discussed in chapter I, and organizational weaknesses at the level of farmers' organizations.

B. Possibilities for overcoming constraints

27. Farmers are generally the last group to benefit from the possibilities offered by modern financial

---

[7] It is, of course, most effective when most traders in a region agree to participate in the scheme, because it will then be difficult for farmers to sell to non-participating traders. It can be difficult to meet this condition; also, banks may be unwilling to accept traders as viable credit counterparties. Commodity exchanges, where they exist, can play a role similar to that of traders, in particular if farmers have strong incentives to sell through the exchange (this is why, for example, several developing country flower producers obtain low-cost credit: their flowers are sold through the Aalsmeer auction in the Netherlands, and there are few good alternatives to this outlet).

[8] There are other forms, and it is national legal and regulatory conditions that determine which commodities are acceptable collateral, and under what modalities. For example, a recent World Bank report states: "In Uruguay, no private bank would accept cattle as collateral for a loan. By contrast, in Kansas, cattle are considered to be the best collateral for a loan." (Heywood Fleisig, op.cit.) In virtually all developing countries, the situation is rather like in Uruguay, cutting off a significant segment of the population from access to low-cost credit.

[9] These issues are discussed in UNCTAD, "Integrated risk management in commodities", UNCTAD/ITCD/COM/8, 26 November 1997.

markets. They are often not even aware of these possibilities; in many instances, they just use the price information generated by commodity exchanges to improve their bargaining position vis-à-vis traders, often quite successfully. Also, they are generally not sufficiently well organized to use them even if they are aware of them; this again underlines the need for promoting strong farmers' associations. Unfortunately, even if strong farmers' associations exist, in many if not most countries they may well be confronted with a poor institutional framework, in particular, local banks do not have the expertise needed to intermediate in risk management or provide credits secured by future production or warehouse receipts. This may be a reason for the Government to set up an intermediating agency, or to stimulate banks to learn about intermediating in risk management or using commodities as collateral (a process to which the international community could contribute).

28. If the risk management and financing needs of farmers are dealt with by an association, the likelihood of them gaining access to modern markets is much larger, firstly because such an association can afford to invest in training and information gathering, secondly because the transaction costs of the bank will be much lower than when dealing with many small farmers on an individual basis and thirdly because there is some form of mutual guarantee by the association's members.

29. Currently, only a few farmers' associations in developing countries and countries in transition are strong enough to engage successfully in marketing or credit provision. These associations are ready to learn about more sophisticated applications. Although small, the number of such associations is likely to increase rapidly in the years to come. In addition, many organizations, including different parts of the United Nations system, are working on upgrading the skill levels of such associations. It should be realized that, only a few years ago, there were no independent farmers' associations in many countries.

C. Effectiveness

30. The use of price risk management instruments and warehouse receipt finance can be effective ways for farmers' associations to reach goals such as guaranteeing a minimum price to their members; improving longer-term marketing; or ensuring an affordable credit programme linked, for example, to input supply. The use of warehouse receipts (the main means of using commodities as collateral relevant for farmers), as seen in box 6 above, improves credit availability while reducing its cost. In practice, banks which have a proper understanding of agricultural finance are also willing to extend the length of their credits to periods of several months before harvests will take place, as long as at harvest the produce is immediately put into supervised warehouses. Price risk management by farmers is likely to be less effective than price risk management by enterprises: the basis risk discussed in the previous chapter is likely to be higher for farmers' associations than for those closer to the act of exporting. The decision to use price risk management instruments therefore requires a careful analysis of the relationships between farmgate prices and futures exchange prices.

Chapter III

GOVERNMENT POLICIES AND PRICE RISK EXPOSURE[10]

31. In many countries, Governments are engaged in commodity trade (e.g. through parastatals). Parastatals may contribute to or act as a burden on government budgets, depending on price levels. This is the case not just for parastatals directly involved in commodity trade, but also for public transport companies (including airlines) which, when oil prices increase, cannot easily increase transport fares. Furthermore, in

---

[10] These issues are discussed at greater length in UNCTAD, "Government policies affecting the use of commodity price risk management and access to commodity finance in developing countries", UNCTAD/ITCD/COM/7, 19 November 1997. This chapter concentrates on price risk management rather than collateral finance; while tying commodity prices to debt service may help to gain better credit terms and parastatals can use commodities as collateral for finance in various ways, commodity price risk exposure is an immediate and often large problem for Governments.

many countries which depend on commodities for their export earnings, a considerable part of government income derives from a tax on exports (or similar charges such as royalties) which is fixed in percentage terms - in other words, if commodity prices decline, tax income declines concomitantly. If commodity export prices are low and Governments are unable to compensate tax or royalty income shortfalls by larger international lending (and it is generally more difficult to obtain funds on good terms when export earnings prospects are worse), the likely result is that it will not be possible to implement the planned expenditure programme. Salaries are then paid late, necessary maintenance on roads, ports and other public infrastructure is delayed and public construction projects and the like are temporarily halted - all with real costs for the economy. Also, in many countries, bulk commodities (crude oil and oil products, wheat, sugar, vegetable oils) account for a large share of imports, and the tax income from these imports is inversely related to price levels: if world market prices increase, Governments tend to decrease import taxes on these strategic commodities in order to protect consumers. The management of these types of direct risks is discussed in section A below.

32. In addition to this, many Governments also have indirect exposure. The health of the economy as a whole may depend on the prices that private-sector actors pay or receive for commodities. Furthermore, the competitiveness of the country may hinge on its transaction costs in international trade, which are to a large extent determined by financing costs and commodity prices (including transport costs). One way for Governments to reduce the risks related to this indirect exposure is by stimulating the emergence of a legal and regulatory framework which enables private-sector actors to manage price risks (and access collateralized finance markets), as discussed in the previous chapters. This, and some other short-term measures Governments may take, is discussed in section B below.[11]

A. Direct government exposure to price risks, and ways to mitigate these risks

33. There are various ways for Governments to mitigate their commodity price risk exposure, namely by promoting diversification; using variable export taxes; using commodity boom bonds (bought obligatorily for hard currency by exporters); privatization, which shifts risks to the private sector; using contingent borrowing for example through the International Monetary Fund's Compensatory and Contingency Financing Facility; liberalizing financial markets to allow easier access to international funds; and using market-based risk management.[12] Market-based methods have the advantage that major risks are externalized to a large and liquid market (generally abroad) with a definite appetite for risk - in other words, a market where risk management can be found relatively cheaply. Governments can consider the following modalities for such market-based risk management:

(a) Using "hybrid" stabilization funds or policies; the Government itself absorbs small risks, but larger risks are shifted to the market;

(b) Making debt service dependent on commodity price levels;

(c) Using the futures and over-the-counter risk management markets for "strategic" risk management (locking in favourable price levels for extended periods).

1. Hybrid stabilization funds and policies

34. Traditional price stabilization funds have a poor track record. When the need arises to draw on the fund to compensate for low prices, the money is often not there - either because insufficient provision has been made or because funds have been spent already for other purposes. The behaviour of commodity prices, makes

---

[11] The effects of commodity booms are not discussed in this paper. Various factors, including the possible crowding-out of non-traditional exports as a result of the currency appreciation caused by high earnings for one export commodity, and over-optimistic investment plans decided on during times of high commodity prices, mean that the effects of such booms are not necessarily positive. See UNCTAD, "Sub-Saharan Africa's oil sector: situation, development and prospects", UNCTAD/COM/89, 13 March 1997, chapter II, and UNCTAD/ITCD/COM/7, chapter IV.

[12] See P. Varangis, T. Akiyama and D. Mitchell, *Managing Commodity Booms - and Busts*, World Bank, Washington, D.C., 1995.

this type of outcome almost unavoidable. In order to play an effective role over the course of a business cycle, a price stabilization fund has to be so large that, in a capital-constrained economy, it is highly likely that a better use can be found for the funds.

35. Hybrid stabilization funds reduce (but do not eliminate) this problem. In an ideal world, they would be second-best solutions, since externalizing all risks to international risk management markets can be shown to be lower-cost. However, in practice, the possibilities for countries to externalize risks are often limited, or come at a high cost. In such cases, and if the Government still wishes to insulate its country's population from the full effect of world market price volatility, it can operate a small stabilization fund, while simultaneously buying options as protection against large price movements. Currently, this hybrid strategy is not used anywhere, although it has been studied for a few countries. A World Bank study on Venezuela, for example, found that an oil stabilization fund could be usefully complemented by the use of market-based risk management; a simulation showed that, given certain objectives, the size of the stabilization fund needed is much smaller and the cost of using market instruments is much less than in the case of holding larger assets in the fund. Moreover, the need for international borrowing to allow the survival of the fund could be eliminated.[13]

2. Commodity-price-dependent debt

36. If a Government depends strongly on earnings from commodities for its income, its ability to service its debt evidently depends directly on the level of world market prices for these commodities. In such a case, it makes sense to link the two directly by, for example, making interest rates a function of oil or cocoa prices. This immediately reduces the default risk on loans (if export earnings are lower or import costs higher, debt service will also be much lower, so it will be relatively easy for the country to avoid a default) and thus is likely to lead to a smaller risk premium (in other words, a lower borrowing cost).

37. Some Governments have indeed used this mechanism, starting in the last century, when the Government of the then Confederate States of America found it could raise money much more effectively by tying reimbursement to cotton prices. The most recent burst of activity started at the end of the 1980s in the context of the renegotiation of existing debts. This resulted in so-called "Brady bonds" in which the interest rate is tied to commodity prices (for example, in the case of Uruguay, to import prices of petroleum products and export prices of beef, wool and rice). However, Governments have been much less active in issuing commodity-price-linked bonds than corporate borrowers.[14] Lack of awareness of existing possibilities certainly plays a role, but in practice lack of coordination between government entities ("turf wars") is often the major bottleneck.

3. Using futures and over-the-counter risk management markets

38. Use of risk management markets has become accepted as sound practice by most central banks, but they tend to limit themselves to the use of interest rate and currency swaps and options, although often the risks of commodity price fluctuations are more important for the country than those from currency or interest rate fluctuations. There have been some examples of central banks and ministries of finance taking out protection against commodity price risks, principally in Latin America, and to cover the price risks linked to oil exports or imports. For example, Mexico's Ministry of Finance has successfully used futures, options and swap markets to protect the Government against the risk of declining taxation earnings on petroleum exports. Use of commodity price risk management instruments by government entities is more widespread in developed countries, in particular in the United States of America (see box 7). There appear to be no cases of African

---

[13] S. Claessens and P. Varangis , "Oil price instability, hedging, and an oil stabilization fund - the case of Venezuela", Washington D.C.: World Bank Policy Research Working Paper, April 1994.

[14] See T. Priovolos, "Experiences with commodity-linked issues" in T. Priovolos and R. Duncan, *Commodity Risk Management and Finance*, World Bank/Oxford University Press, 1991.

governments, which are highly exposed to commodity price fluctuations, protecting themselves against these risks. Possibilities abound (see box 8 for one example), but the unfamiliarity of most government policy-makers with these relatively new instruments, and other obstacles, have so far prevented most countries from benefiting from them.

4. Obstacles

39. Governments have, so far, not been very active on these various markets. They have tended to absorb price risks themselves or shifted them to their citizens. Generally by default rather than by choice, they have tended to forego the possibility of locking favourable price levels for extended periods. How does one explain this relative lack of use of risk management markets? The main constraints are described below.

(i) Mistrust, fear, inertia and lack of awareness/understanding

40. Risk management markets are often seen as speculative or, worse, manipulated by large international players. It is then concluded that it is more risky for Governments to use these markets than to simply continue absorbing risks. There is little ground for this fear: manipulation is, in practice, rather difficult (most would-be manipulators end up with large losses), and speculation, while exacerbating short-term price movements, has little effect on longer-term price levels.[15] If commodity trade is relatively well managed and the grades of commodities traded by the country conform more or less to the standard grades traded internationally, the prices quoted on risk management markets will provide a good proxy for the prices to be received or paid by the country and thus can be used effectively for risk management.

Box 7
Oil price risk management in United States public entities

Although still in a minority, a number of United States public entities are actively using market-based risk management instruments to manage their exposure to oil price risks. In an evaluation of the reasons for and effectiveness of this risk management, it was found that the reasons varied:

- Protection of state revenues from oil and gas production;
- Protection of the budget for regular purchases of oil products;
- Protection of the budget for subsidizing fuel consumption by low-income households;
- Avoiding the need for large (energy or public transport) price increases for consumers;
- Protection of the value of inventories; and
- Taking advantage of favourable pricing situations.

In most cases, public entities use over-the-counter instruments rather than exchange-traded futures and options, because they find these are easier to administer, require less technical understanding than exchange-traded instruments, require few resources once the strategy is put in place, and do not require many administrative controls to prevent loss of public funds. Although the effectiveness of the use of these instruments has often been reduced by the bureaucratic procedures that agencies are forced to follow, overall agencies have found that the use of these instruments meets their objectives (and if not, it was generally concluded that changing the specific market-based instruments being used would make it possible to meet their objectives) and is beneficial to them.

Source: Decision Analysis Corporation of Virginia, *Management of fuel price risk in the public sector*, prepared for the Energy Information Administration, Department of Energy, United States of America, 1993.

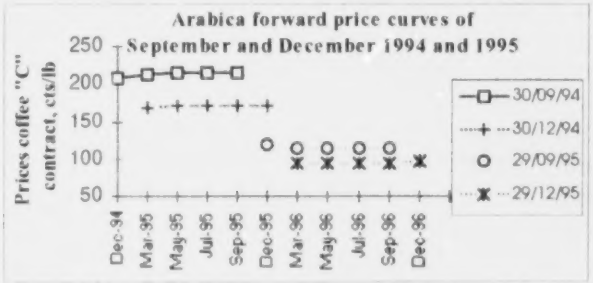
41. For those holding political or practical responsibility for earnings (or expenditures) related to commodity price levels, it is often much easier to blame shortfalls on negative price developments than to explain why risk management should be put in place. Price risk management is, in many respects, similar to insurance: if nothing bad happens, the insurance does not pay out. For those who do not understand this principle, it is very easy to conclude that the insurance premium has been wasted and that the government officials who took the decision to put this insurance in place were incompetent or even corrupt. Indeed, in a number of countries, government officials have been accused of this, either by parts of public opinion or by other branches of the Government. In such a climate, inertia is the safest solution and until Government

[15] UNCTAD, "New types of non-trade-related participation in commodity futures markets", UNCTAD/COM/83, 21 May 1996.

Box 8
Using risk management as a strategic tool - the example of coffee in Africa

From time to time, commodity market prices reach levels that, for either buyers or sellers, seem too good to be true. Of course, when prices are climbing rapidly, or falling precipitously, one cannot be sure on any one day whether this price move will continue. However, if prices stay at the same level, they may be good enough for example, to ensure the profitability of an investment project or government income higher than necessary to meet its budget. If so, then foregoing the opportunity to lock in this price in the hope that tomorrow's price will be even better amounts to speculation (today's financial markets offer the possibility to lock in a minimum price while still being able to benefit partly from price increases without the payment of any premiums).

A strategic decision to lock these prices in for a longer period can be a very sound one. For an example of how useful this type of strategic risk management can be, the case of coffee in Africa is examined here. Of course, this is a hypothetical case - in 1994, African Governments were, on the whole, not ready to make strategic price risk management decisions (the instruments for this had only been in existence for a few years).



After years of depression, coffee prices started rising rapidly in May 1994. Arabica and robusta prices went respectively from 90 cents/lb and 70 cts/lb in April to 2.20 US$/lb and 1.60 US$/lb in July and stayed very high for four months, reaching a peak in September before starting to fall quite rapidly. In the opinion of most market players, (at the time and not just with hindsight), price levels were highly attractive. These high prices could realistically have been locked in: as the graph above shows, the forward price curve for coffee was more or less flat. The market was also deep enough to absorb considerable hedging activity, since in 1994 futures and options turnovers equaled respectively 20 and 7 times the size of the world arabica and robusta coffee market.

Two-year hedge 1995-1996 starting January 1995 (US$ million)		
	1995	1996
Exports of Arabica		
Coffee exports	910	820
Additional earnings from hedging:		
- average	+ 183	+ 309
- worst case	+ 78	+ 204
Exports of Robusta		
Coffee exports	1215	975
Additional earnings from hedging:		
- average	+ 276	+ 640
- worst case	+ 34	+ 398

Source: based on UNCTAD estimates.
[a] It is assumed that the hedge locked in the average prices of September-December 1994 ("average"), or the December prices ("worst case") for a 2-year period (1995-1996), on 80% of the 1994 export volume.

The table shows the additional earnings that could have been possible had African coffee exporters been able to lock in, for two years (1995-1996), the high prices of 1994 - adding up to US$ 1.4 billion if exporters' risk management decisions had been equally spaced over the four last months of that year. Even if the hedge had only been put in place in December, when prices had already fallen by more than one quarter since September, additional coffee export revenues of US$ 700 million would have resulted.

Unfortunately, this opportunity could not be taken advantage of. The necessary decision-making structures were not in place, and indeed no support to develop the necessary thinking and institution-building had been given by either Western banks (most considered that African countries were not ready for this kind of business, although at least one Government was approached with an offer to lock in coffee prices) or multilateral organizations.

officials are held accountable for the consequences of negative price changes, this is unlikely to change.[16]

[16] A precedent was set in the United States in 1992, when a court found that the directors of a grain farmers' cooperative had a duty to understand risk management techniques and had "breached their duties by retaining a manager inexperienced in hedging (...) and failing to attain knowledge of the basic fundamentals of hedging..." (Brane v. Roth, Court of Appeals of Indiana, First District, 20 April 1992, *North Eastern Reporter*, 2nd Series).

42. Fear of markets is often compounded by a fear on the part of senior government officials that their staff, who would be responsible on a day-to-day basis, cannot be trusted to use markets properly. This is not completely unfounded (there have been some clear abuses) but should not apply to the use of all instruments; for example, a swap, strategically placed from time to time to ensure the budget can be met, can be decided on by senior decision-makers themselves, using any of a number of low-cost methods to ensure that the price offered is fair. In contrast, using futures and options markets on a regular basis is much more risky and requires a stringent control environment; if conditions are not suitable for such stringent controls, one should refrain from using this group of instruments.

(ii) Legal and regulatory constraints

43. Many government bodies and parastatals do not have the clear legal authority to enter into risk management transactions, either because their scope of activities is enumerated in their statutes and risk management is not mentioned or because of general policies or regulations banning such entities from "speculation" without properly defining the difference between speculation and risk management. The inability of some state entities (e.g. municipal authorities) to hold accounts in other countries also makes risk management rather difficult.

44. Even if, strictly speaking, there are no such legal or regulatory constraints, ambiguity on the legal and regulatory status of public bodies' use of modern financial markets acts as an obstacle. Foreign entities are often not willing to spend the legal fees needed to ensure that they can enforce compliance will the contract and indeed are generally not willing to accept even small risks that contracts might not be legally enforceable (some US$179 million were lost by banks in the late 1980s when over 100 United Kingdom municipalities defaulted on risk management contracts and successfully claimed that, as they did not have the authority to enter into these contracts in the first place, the contracts should be considered void).

(iii) Organizational complexity

45. Designing an appropriate risk management programme is often not easy, partly because of organizational problems. If any one department (e.g. the Ministry of Finance, or the Ministry of Agriculture) considers it useful to take out price insurance (using options or more complex risk management instruments), it probably needs Cabinet approval and, in addition, a foreign exchange allocation from the Central Bank - which may not approve of this use of its scarce hard currency. Also, for most types of risk management deals and collateralized finance, some form of financial guarantee needs to be given to the providers. The Central Bank, for example, may provide part of its gold reserves as collateral, or the government parastatal active in coffee marketing may assign two months of its earnings to an escrow account. In any case, various groups are involved, and it may be prohibitively difficult to get everyone to agree.

46. This sort of difficulty is even greater when a Government wishes to lock in exceptionally favourable prices - the form of strategic risk management discussed in box 8. Most commodity prices do not really move cyclically but are relatively flat for long periods and then peak for a relatively short time. Especially for exports, the "window of opportunity" for locking in a high price is therefore fairly short and the whole decision-making machinery needs to be put in place well in advance in other words at a time when prices are not very attractive and policy-makers thus have little incentive to think about the possibility of locking in prices for a prolonged period. If the necessary mechanisms are not put in place in time, by the time everyone involved understands what is at stake and what needs to be done, the opportunity has probably passed. In other words, Governments should already plan for this contingency and decide on a clear policy and procedure to be triggered automatically when prices reach certain highly favourable levels.

B. Indirect risk

47. Even if the major part of commodity trade is in the hands of the private sector and direct government taxation on commodity trade flows is of limited importance, Governments remain exposed to price risks

through the general effects that these risks have on their countries' population. The role of Governments in risk management is therefore no less important than if it were directly exposed; it is just different. The Government needs to create the framework which allows the private sector to protect itself from price fluctuations, and indirectly this would also protect the Government.

48. The price risks to which private sector actors are exposed are not necessarily identical to the country's price risks. For example, agents of foreign commodity buyers work on a commission and the prevailing prices of the moment are hardly relevant to them. Importers who buy at world market prices and sell to consumers for this price plus a mark-up are also only interested in their relative margin, not in the absolute prices. The result is that the burden of price volatility is borne by the farmers and the consumers respectively, both groups being in a much worse position than traders for managing exposure to price risks.

49. Government policies can be used to stimulate private entities to be more proactive in managing longer-term price risks. For example, taxation policies can be improved, the use of foreign exchange for risk management programmes can be authorized and export procedures can be adapted in such a way that the timing of commodity exports becomes more certain (and hedging thus becomes easier). Governments can also undertake risk management "on behalf" of their country's private sector actors. If import prices are low, Governments can buy options and make importers pay through slightly higher import taxes and if prices increase, consumers can be compensated through lower taxes. Similarly, Governments can buy options "on behalf" of exporters to protect them against the risk of price declines. If necessary, Governments can themselves provide certain facilities for a limited period - as has been done, for example, by the Governments of Canada, Mexico and the United States to facilitate the process of agricultural liberalization.[17]

C. Effectiveness

50. Can modern risk management and finance markets be effective tools for bringing government goals nearer? As already discussed in chapter I, the effectiveness of price risk management markets is never 100 per cent; they can only be used to manage international price risks (which are not necessarily well correlated will the export or import price risks to which the Government is exposed), and the risk of fluctuations in export or import volumes remains. Another important factor is how realistic government goals are. If the goal is to ensure a local minimum price for an export commodity that is much higher than that prevailing on the world market, then no amount of financial engineering will allow the Government to reach this goal without paying a major subsidy (though, financial markets will allow the Government to ensure that the amount budgeted for its subsidies is sufficient even if world market prices fall). Similarly, the use of commodity-linked debt by developing countries will reduce the Government's financing charges, but not to the level paid by the most creditworthy borrowers. However, if the goal is realistic (for example, ensuring for the coming two years a minimum price somewhat below current price levels, or reducing international borrowing costs to slightly above LIBOR), it is likely that it will be brought nearer, even though it is still unlikely to be reached in a perfect manner.

IV. CONCLUSION

51. As a result of developments in world commodity trade (such as better information availability, the increasing importance of good logistics, and increasing competition between exporters) and the withdrawal of many Governments from the marketing and pricing of commodities, the use of market-based risk management instruments and collateral financing techniques has grown increasingly useful, perhaps even crucial: for

---

[17] For descriptions of the Mexican and Canadian experiences P. Varangis, and D. Larson, "Dealing with commodity price uncertainty", World Bank Policy Research Working Paper No. 1667, October1996. See also UNCTAD, "Risk distribution after liberalization of commodity marketing and problems of access to risk management markets for developing country entities", TD/B/CN.1/GE.1/2, August 1994; C.R. Duncan, and L. Rutten , "Managing commodity price instability in newly liberalized economies", Economic and Social Research Council, London, Global Economic Institutions, April 1996.

Governments, because they make it possible to secure budgets and reduce international borrowing costs; for enterprises, because they improve efficiency, reduce costs, and allow better access to finance, thus improving profitability; for farmers, because it enlarges their marketing options and facilitates their access to the credit they require to buy inputs. The use of such instruments is also effective: as long as goals are set realistically (that is, reflect the realities of the market), using the instruments will bring these goals much nearer, although one should not expect perfect results. Alternative tools to reach these goals are at times (but not always) available, but they tend to be more expensive and less effective.

52. However, use of these market-based instruments has been constrained by a number of factors. In all cases, there is a large need for awareness-raising and training. The use of price risk management instruments and warehouse receipt finance has also been restricted by a poor institutional environment, with weak local banking structures and underdeveloped farmers' associations. Furthermore, there is much room for the improvement of policy, legal and regulatory frameworks.

53. These policy, legal and regulatory issues play an even larger role in constraining the use of commodities to facilitate longer-term finance for large companies or projects. The use of commodities as collateral, in one form or another, can do much to allow trade and investment which otherwise would not have been possible. A lack of awareness and understanding does play some role, but inappropriate government policies, rules and regulations also play a role. The international community also imposes some obstacles, particularly through the negative pledge covenants imposed by multilateral development banks.

54. It should be clear that modern, market-based financial tools are not a panacea and that, if improperly applied, they can be dangerous. Especially for complex deals, there is often an information imbalance: the fair costs of structuring the financing, or of the risk management instrument, are only known to the provider. Nevertheless, assistance can be found by those who feel they do not have the specialized skills to evaluate such complex financial deals. Furthermore, if an inappropriate strategy is chosen (that is, a strategy that is more complex than the entity can handle), the risks of using risk management markets can be large. The purchase of options and the strategic use of swaps (in particular, if options are embedded) involves little risk, as long as decision-makers have ensured that the pricing is fair. However, using futures and over-the-counter risk management markets in a more active manner does require a good and relatively sophisticated control environment; information on how to set this up is widely available, but the necessary conditions may not exist in all cases, and if so, entities may be better off refraining from such use until these conditions have been built up.

55. If the use of modern market-based price risk management and financing tools is to the benefit of private-sector actors, Governments need to ensure that the policy, legal and regulatory framework in place stimulates the proper use of these tools. This would imply, in many cases, a systematic revision of policies in a range of areas: taxation, accountancy rules, foreign exchange regulations, bankruptcy rules and proceedings, export licensing systems, etc. One of the consequences of such a revision (if acted upon) would be an improvement of the country's sovereign risk rating, with an immediate beneficial effect on the availability and costs of finance. If it is felt that the private-sector institutional framework is so weak that it cannot be relied upon to provide private corporations and farmers' associations with access to these modern tools, a Government can consider playing this intermediary role itself.

56. Governments may also benefit from analyzing their exposure to commodity price risks, both directly and indirectly. Such an analysis could be done in a systematic manner through a risk management committee consisting of several ministries and the central bank. In many cases, the risks that are, voluntarily or by necessity, borne by the Government can be externalized to a foreign market at a relatively low cost. The risks that come with strong dependence on commodities for a major part of export earnings represent a weakness, but this weakness can be converted into a strength if the Government ties it debt obligations to commodity prices. For parastatals, the use of modern commodity financing techniques can often be a good way to reduce financing costs.

57. As noted, there are still many constraints which prevent the private sector as well as government bodies and entities from adopting effective price risk management and financing strategies. A coordinated effort of national Governments and the international community will be necessary to overcome these constraints. Of course, this poses questions for international commodity policies. Traditionally, such policies were supply- or demand-oriented. It can be argued that, nowadays, transaction-oriented policies focusing on the part of the commodity chain between production and consumption can be at least as effective. National bodies and international agencies (including international commodity bodies) might find it useful to review their policies and projects in this light. Apart from the provision of analysis, information and training, international agencies may consider it useful to intensify their efforts to strengthen the capacity of farmers' associations and local banks to play an active role in commodity marketing and finance. Support for the improvement of legal and regulatory frameworks can also be a very cost-effective way of reducing the commodity trade transaction costs of actors in developing countries and countries with economies in transition. International organizations could also consider whether, instead of the traditional "financing" type of development assistance, it would not be more effective to provide support to private-sector operations in one way or another (including through the provision of new sovereign risk guarantee schemes for risk management transactions or to insure against the risk of non-delivery of physical commodities which have served as the collateral for financing or risk management facilities).[18]

[18] See also TD/B/CN.1/GE.1/3 and UNCTAD, "Report of the Group of Experts on Risk Management in Commodity Trade, TD/B/CN.1/GE.1/4, November 1994.